AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

What is claimed is:

1. (currently amended) A device for optically initiating a combustive reaction with a slurry fuel and air mixture, said device comprising:

an optical energy source;

at least one combustion ~~a combustion~~ chamber containing the slurry fuel and air mixture therewithin;

a transfer device for optically interconnecting said optical energy source with said combustion chamber; and

wherein said optical energy source generates an output for interacting with the slurry fuel and air mixture to create a combustive reaction.

2. (original) The device according to Claim 1, wherein said output includes a pulse having a leading edge and a trailing edge, said leading edge having higher power than said trailing edge.

3. (original) The device according to Claim 1, wherein said output includes a first and second pulse, said first pulse having higher power than said second pulse.

4. (original) The device according to Claim 3, wherein said first pulse is injected a predetermined time prior to said second pulse.

5. (original) The device according to Claim 4, wherein said predetermined time is less than ten (10) nanoseconds.

6. (original) The device according to Claim 1, wherein said optical energy source includes a laser.

7. (currently amended) The device according to Claim 1, wherein said ~~delivery~~ transfer device includes a fiber optic.

8. (currently amended) The device according to ~~Claim 21~~ Claim 1, wherein said fiber optic includes a fiber optic bundle.

9. (original) The device according to Claim 1, wherein said output includes light.

10. (original) The device according to Claim 9, wherein said light includes a laser beam.

11. (original) The device according to Claim 9, wherein said light comprises wavelengths less than 300 Nanometers.

12. (original) The device according to Claim 1, wherein said output is greater than one (1) Megawatt.

13. (original) The device according to Claim 1, wherein said combustive reaction yields a dissociated mixture.

14. (original) The device according to Claim 1, wherein said combustive reaction yields a mixture of molecular and atomic oxygen and chemically cracked fuel.

15. (new) A device for optically initiating a combustive reaction with a slurry fuel and air mixture, said device comprising:

at least one combustion chamber containing the slurry fuel and air mixture therewithin;

an optical energy source adapted to generate an optical signal for interacting with the slurry fuel and air mixture to create a combustive reaction;

a optical fiber for optically interconnecting said optical energy source with said combustion chamber; and

an optical wavelength filter adapted to filter said optical signal such that residual light having wavelengths longer than a specified length is removed.

16. (new) The device according to Claim 15, wherein said device further comprises an intensity profiler adapted to modify said optical signal such that said optical signal has a pulsed format having a high power portion and a lower power portion.

17. (new) The device according to Claim 16, wherein said pulsed format includes a pulse having a leading edge and a trailing edge, said leading edge having higher power than said trailing edge.

18. (new) The device according to Claim 16, wherein said pulsed format includes a first and second pulse, said first pulse having higher power than said second pulse.

19. (new) The device according to Claim 18, wherein said first pulse is injected less than one hundred (100) nanoseconds prior to said second pulse.

20. (new) The device according to Claim 18, wherein said first pulse is injected less than ten (10) nanoseconds prior to said second pulse.

21. (new) The device according to Claim 15, wherein said optical energy source includes a laser.

22. (new) The device according to Claim 15, wherein said optical fiber is a solarizing optical fiber.

23. (new) The device according to Claim 15, wherein said optical wavelength filter filters said optical signal such that said optical signal comprises wavelengths less than 300 Nanometers.

24 (new) The device according to Claim 15, wherein said optical signal is greater than one (1) Megawatt.

25. (new) The device according to Claim 15, wherein said combustive reaction yields a dissociated mixture.

26. (new) A device for optically initiating a combustive reaction with a slurry fuel and air mixture, said device comprising:

at least one combustion chamber containing the slurry fuel and air mixture therewithin;

a laser energy source adapted to generate an optical signal for interacting with the slurry fuel and air mixture to create a combustive reaction;

a optical fiber for optically interconnecting said optical energy source with said combustion chamber;

an optical wavelength filter adapted to filter said optical signal such that residual light having wavelengths longer than a specified length is removed; and

an intensity profiler adapted to modify said optical signal such that said optical signal has a pulsed format having a high power portion and a lower power portion.

27. (new) The device according to Claim 26, wherein said pulsed format includes a pulse having a leading edge and a trailing edge, said leading edge having higher power than said trailing edge.

28. (new) The device according to Claim 26, wherein said pulsed format includes a first and second pulse, said first pulse having higher power than said second pulse.

29. (new) The device according to Claim 28, wherein said first pulse is injected less than one hundred (100) nanoseconds prior to said second pulse.

30. (new) The device according to Claim 28, wherein said first pulse is injected less than ten (10) nanoseconds prior to said second pulse.

31. (new) The device according to Claim 26, wherein said optical fiber is a solarizing optical fiber.

32. (new) The device according to Claim 26, wherein said optical wavelength filter filters said optical signal such that said optical signal comprises wavelengths less than 300 Nanometers.

33 (new) The device according to Claim 26, wherein said optical signal is greater than one (1) Megawatt.